



SEQUENCE LISTING

<110> Nakamura, Yusuke  
Furukawa, Yoichi

<120> GENE AND PROTEIN RELATING TO HEPATOCELLULAR CARCINOMA AND METHODS OF  
USE THEREOF

<130> 25371-021CIP/ONC-A0206P-US (CIP)

<140> US 10/788,847  
<141> 2004-02-27

<150> PCT/JP02/09876  
<151> 2002-09-25

<150> US 60/324,261  
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<151> 2002-06-26

<150> CA 2,399,569  
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<150> US 60/450,644  
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<170> PatentIn version 3.1

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Pro Leu Arg Pro Gly Glu Leu Leu Phe Arg Ser Asp Pro Leu Ala Tyr  
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| Gly Lys Glu Lys Leu Met Arg Cys Ser Gln Cys Arg Val Ala Lys Tyr |     |
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| Cys Ser Ala Lys Cys Gln Lys Lys Ala Trp Pro Asp His Lys Arg Glu |     |
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| Cys Lys Cys Leu Lys Ser Cys Lys Pro Arg Tyr Pro Pro Asp Ser Val |     |
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| cga ctt ctt ggc aga gtt gtc ttc aaa ctt atg gat gga gca cct tca | 449 |
| Arg Leu Leu Gly Arg Val Val Phe Lys Leu Met Asp Gly Ala Pro Ser |     |
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| Glu Ser Glu Lys Leu Tyr Ser Phe Tyr Asp Leu Glu Ser Asn Ile Asn |     |
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| Lys Leu Thr Glu Asp Lys Lys Glu Gly Leu Arg Gln Leu Val Met Thr |     |
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| Phe Gln His Phe Met Arg Glu Glu Ile Gln Asp Ala Ser Gln Leu Pro |     |
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| Pro Ala Phe Asp Leu Phe Glu Ala Phe Ala Lys Val Ile Cys Asn Ser |     |
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| Val Gly Glu Glu Leu Thr Ile Cys Tyr Leu Asp Met Leu Met Thr Ser |     |
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| Glu Glu Arg Arg Lys Gln Leu Arg Asp Gln Tyr Cys Phe Glu Cys Asp |     |
| 250 255 260   |     |
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| Asp         | Glu        | Gln        | Val        | Trp        | Lys         | Glu | Val        | Gln        | Glu        | Ser | Leu | Lys | Lys | Ile | Glu |      |
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| Glu         | Leu        | Lys        | Ala        | His        | Trp         | Lys | Trp        | Glu        | Gln        | Val | Leu | Ala | Met | Cys | Gln |      |
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| gcg         | atc        | ata        | agc        | agc        | aat         | tct | gaa        | cgg        | ctt        | ccc | gat | atc | aac | atc | tac | 1073 |
| Ala         | Ile        | Ile        | Ser        | Ser        | Asn         | Ser | Glu        | Arg        | Leu        | Pro | Asp | Ile | Asn | Ile | Tyr |      |
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| Gln         | Leu        | Lys        | Val        | Leu        | Asp         | Cys | Ala        | Met        | Asp        | Ala | Cys | Ile | Asn | Leu | Gly |      |
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| ctg         | ttg        | gag        | gaa        | gcc        | ttg         | ttc | tat        | ggg        | act        | cgg | acc | atg | gag | cca | tac | 1169 |
| Leu         | Leu        | Glu        | Glu        | Ala        | Leu         | Phe | Tyr        | Gly        | Thr        | Arg | Thr | Met | Glu | Pro | Tyr |      |
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| agg         | att        | ttt        | ttc        | cca        | gga         | agc | cat        | ccc        | gtc        | aga | ggg | gtt | caa | gtg | atg | 1217 |
| Arg         | Ile        | Phe        | Phe        | Pro        | Gly         | Ser | His        | Pro        | Val        | Arg | Gly | Val | Gln | Val | Met |      |
|             | 360        |            |            |            |             | 365 |            |            |            |     | 370 |     |     |     |     |      |
| aaa         | gtt        | ggc        | aaa        | ctg        | cag         | cta | cat        | caa        | ggc        | atg | ttt | ccc | caa | gca | atg | 1265 |
| Lys         | Val        | Gly        | Lys        | Leu        | Gln         | Leu | His        | Gln        | Gly        | Met | Phe | Pro | Gln | Ala | Met |      |
| 375         |            |            |            |            | 380         |     |            |            |            | 385 |     |     |     |     | 390 |      |
| aag         | aat        | ctg        | aga        | ctg        | gct         | ttt | gat        | att        | atg        | aga | gtg | aca | cat | ggc | aga | 1313 |
| Lys         | Asn        | Leu        | Arg        | Leu        | Ala         | Phe | Asp        | Ile        | Met        | Arg | Val | Thr | His | Gly | Arg |      |
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| gaa         | cac        | agc        | ctg        | att        | gaa         | gat | ttg        | att        | cta        | ctt | tta | gaa | gaa | tgc | gac | 1361 |
| Glu         | His        | Ser        | Leu        | Ile        | Glu         | Asp | Leu        | Ile        | Leu        | Leu | Leu | Glu | Glu | Cys | Asp |      |
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| gcc         | aac        | atc        | aga        | gca        | tcc         | taa | gggaacgcag | tcagagggaa | atacggcgtg |     |     |     |     |     |     | 1412 |
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| tctcttattg  | gaaattctgt | tccgtgtttg | tgtaggtaaa | taaaggcaga | catgggtttgc |     |            |            |            |     |     |     |     |     |     | 1532 |
| aaaccacaag  | aatcattagt | tgtagagaag | cacgattata | ataaattcaa | aacatttggt  |     |            |            |            |     |     |     |     |     |     | 1592 |
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| Gly | Leu | Arg | Ala | Val | Thr | Pro | Leu | Arg | Pro | Gly | Glu | Leu | Leu | Phe | Arg |  |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |  |
| Ser | Asp | Pro | Leu | Ala | Tyr | Thr | Val | Cys | Lys | Gly | Ser | Arg | Gly | Val | Val |  |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |  |
| Cys | Asp | Arg | Cys | Leu | Leu | Gly | Lys | Glu | Lys | Leu | Met | Arg | Cys | Ser | Gln |  |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |  |
| Cys | Arg | Val | Ala | Lys | Tyr | Cys | Ser | Ala | Lys | Cys | Gln | Lys | Lys | Ala | Trp |  |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |  |
| Pro | Asp | His | Lys | Arg | Glu | Cys | Lys | Cys | Leu | Lys | Ser | Cys | Lys | Pro | Arg |  |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |  |
| Tyr | Pro | Pro | Asp | Ser | Val | Arg | Leu | Leu | Gly | Arg | Val | Val | Phe | Lys | Leu |  |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |  |
| Met | Asp | Gly | Ala | Pro | Ser | Glu | Ser | Glu | Lys | Leu | Tyr | Ser | Phe | Tyr | Asp |  |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |  |
| Leu | Glu | Ser | Asn | Ile | Asn | Lys | Leu | Thr | Glu | Asp | Lys | Lys | Glu | Gly | Leu |  |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |  |
| Arg | Gln | Leu | Val | Met | Thr | Phe | Gln | His | Phe | Met | Arg | Glu | Glu | Ile | Gln |  |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |  |
| Asp | Ala | Ser | Gln | Leu | Pro | Pro | Ala | Phe | Asp | Leu | Phe | Glu | Ala | Phe | Ala |  |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |  |
| Lys | Val | Ile | Cys | Asn | Ser | Phe | Thr | Ile | Cys | Asn | Ala | Glu | Met | Gln | Glu |  |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |  |
| Val | Gly | Val | Gly | Leu | Tyr | Pro | Ser | Ile | Ser | Leu | Leu | Asn | His | Ser | Cys |  |
|     |     |     | 195 |     |     |     | 200 |     |     |     |     | 205 |     |     |     |  |
| Asp | Pro | Asn | Cys | Ser | Ile | Val | Phe | Asn | Gly | Pro | His | Leu | Leu | Leu | Arg |  |
|     |     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |  |
| Ala | Val | Arg | Asp | Ile | Glu | Val | Gly | Glu | Glu | Leu | Thr | Ile | Cys | Tyr | Leu |  |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |  |
| Asp | Met | Leu | Met | Thr | Ser | Glu | Glu | Arg | Arg | Lys | Gln | Leu | Arg | Asp | Gln |  |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |  |
| Tyr | Cys | Phe | Glu | Cys | Asp | Cys | Phe | Arg | Cys | Gln | Thr | Gln | Asp | Lys | Asp |  |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |  |
| Ala | Asp | Met | Leu | Thr | Gly | Asp | Glu | Gln | Val | Trp | Lys | Glu | Val | Gln | Glu |  |
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| Ser | Leu | Lys | Lys | Ile | Glu | Glu | Leu | Lys | Ala | His | Trp | Lys | Trp | Glu | Gln |  |
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 Pro Asp Ile Asn Ile Tyr Gln Leu Lys Val Leu Asp Cys Ala Met Asp  
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 <400> 36  
 ccgctcgagg gatgctctga tggtggcgtc g 31  
  
 <210> 37  
 <211> 64  
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 <223> An artificially synthesized oligonucleotide sequence  
  
 <220>  
 <221> misc\_feature  
 <222> (21)..(40)  
 <223> "n"=A, G, C or T  
  
 <400> 37  
 gggagaattc cgacacgcgt nnnnnnnnnn nnnnnnnnnn ctcgagcgtc tacatggatc 60  
 ctca 64  
  
 <210> 38  
 <211> 31  
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 <400> 38  
 ggggtaccca gtgctgggaa cgcccctctc g 31  
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 <400> 39  
 ggggtaccca ctcccgccgg agactaggtc c 31  
 <210> 40  
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 <400> 40  
 ggggtaccct cgcattctcc tcctcctctg c 31  
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 <211> 31  
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 <400> 41  
 ggggtacctg gtccctcctc ctcccgccct g 31  
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 <400> 42  
 ggggtacctc ccgccctgcc tcccgccct c 31

<210> 43  
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<220>  
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<400> 43  
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<210> 44  
 <211> 4867  
 <212> DNA  
 <213> Artificial

<220>  
 <223> An artificially synthesized sequence of the psiU6BX6 Plasmid

<220>  
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 <222> (485)..(489)  
 <223> "n" indicates gap

<400> 44  
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 gcccgcgctct gaacctccg cgccgccccg gccccagtgg aaagacgcgc aggcaaacg 180  
 caccacgtga cggagcgtga ccgcgcgccg agcgcgcgcc aaggctcgggc aggaagaggg 240  
 cctatttccc atgattcctt catatttgca tatacgatac aaggctgtta gagagataat 300  
 tagaattaat ttgactgtaa acacaaagat attagtacaa aatacgtgac gtagaaagta 360  
 ataatttctt gggtagtttg cagttttaaa attatgtttt aaaatggact atcatatgct 420  
 taccgtaact tgaaagtatt tcgatttctt ggctttatat atcttgtgga aaggacgaaa 480  
 caccnnnnnt ttttacatca ggttggtttt ctgtttggtt ttttttttac accacgttta 540  
 tacgccggtg cacggtttac cactgaaaac acctttcatc tacaggtgat atcttttaac 600  
 acaaataaaa tgtagtagtc ctaggagacg gaatagaagg aggtggggcc taaagccgaa 660  
 ttctgcagat atccatcaca ctggcggccg ctcgagtgag gcggaaagaa ccagctgggg 720  
 ctctaggggg tatccccacg cgccctgtag cggcgcatta agcgcggcgg gtgtggtggt 780  
 tacgcgcagc gtgaccgta cacttgccag cgccctagcg cccgctcctt tcgcttttctt 840  
 ccttccttt ctcgccacgt tcgccggtt tccccgtcaa gctctaaatc gggggctccc 900  
 tttagggttc cgatttagtg ctttacggca cctcgacccc aaaaaacttg attagggtga 960

|             |            |            |            |            |            |      |
|-------------|------------|------------|------------|------------|------------|------|
| tggttcacgt  | agtgggcat  | cgccctgata | gacgggtttt | cgccctttga | cgttggagtc | 1020 |
| cacgttcttt  | aatagtggac | tcttggtcca | aactggaaca | acactcaacc | ctatctcggt | 1080 |
| ctattctttt  | gatttataag | ggattttgcc | gatttcggcc | tattggttaa | aaaatgagct | 1140 |
| gatttaacaa  | aaatttaacg | cgaattaatt | ctgtggaatg | tgtgtcagtt | agggtgtgga | 1200 |
| aagtccccag  | gctccccagc | aggcagaagt | atgcaaagca | tgcattctca | ttagtcagca | 1260 |
| accagggtgtg | gaaagtcccc | aggctcccca | gcaggcagaa | gtatgcaaag | catgcatctc | 1320 |
| aattagtcag  | caaccatagt | cccgccccta | actccgcca  | tcccgcccct | aactccgccc | 1380 |
| agttccgccc  | attctccgcc | ccatggctga | ctaatttttt | ttatttatgc | agaggccgag | 1440 |
| gccgcctctg  | cctctgagct | attccagaag | tagtgaggag | gcttttttgg | aggcctaggc | 1500 |
| ttttgcaaaa  | agctcccggg | agcttgata  | tccattttcg | gatctgatca | agagacagga | 1560 |
| tgaggatcgt  | ttcgcatgat | tgaacaagat | ggattgcacg | caggttctcc | ggccgcttgg | 1620 |
| gtggagaggc  | tattcggcta | tgactgggca | caacagacaa | tcggctgctc | tgatgccgcc | 1680 |
| gtgttccggc  | tgtcagcgca | ggggcgccc  | gttctttttg | tcaagaccga | cctgtccggt | 1740 |
| gccctgaatg  | aactgcagga | cgaggcagcg | cggctatcgt | ggctggccac | gacgggcgtt | 1800 |
| ccttgcgag   | ctgtgctcga | cgttgtcact | gaagcgggaa | gggactggct | gctattgggc | 1860 |
| gaagtgccgg  | ggcaggatct | cctgtcatct | caccttgctc | ctgccgagaa | agtatccatc | 1920 |
| atggctgatg  | caatgcggcg | gctgcatacg | cttgatccgg | ctacctgccc | attcgaccac | 1980 |
| caagcgaaac  | atcgcatcga | gcgagcacgt | actcggatgg | aagccggtct | tgtcgatcag | 2040 |
| gatgatctgg  | acgaagagca | tcaggggctc | gcgccagccg | aactgttcgc | caggctcaag | 2100 |
| gcgcgcatgc  | ccgacggcga | ggatctcgtc | gtgacctatg | gcgatgcctg | cttgccgaat | 2160 |
| atcatggtgg  | aaaatggccg | cttttctgga | ttcatcgact | gtggccggct | gggtgtggcg | 2220 |
| gaccgctatc  | aggacatagc | gttggctacc | cgtgatattg | ctgaagagct | tggcggcgaa | 2280 |
| tgggctgacc  | gcttcctcgt | gctttacggc | atcgccgctc | ccgattcgca | gcgcatcgcc | 2340 |
| ttctatcgcc  | ttcttgacga | gttcttctga | gcgggactct | ggggttcgaa | atgaccgacc | 2400 |
| aagcgacgcc  | caacctgcca | tcacgagatt | tcgattccac | cgccgccttc | tatgaaaggt | 2460 |
| tgggcttcgg  | aatcggtttc | cgggacgccg | gctggatgat | cctccagcgc | ggggatctca | 2520 |
| tgtggagtt   | cttcgcccac | cccaacttgt | ttattgcagc | ttataatggc | tacaaataaa | 2580 |
| gcaaagcatc  | acaaatttca | caaataaagc | atttttttca | ctgcattcta | gttgtggttt | 2640 |

|             |            |            |             |             |            |      |
|-------------|------------|------------|-------------|-------------|------------|------|
| gtccaaactc  | atcaatgtat | cttatcatgt | ctgtataaccg | tcgacctcta  | gctagagctt | 2700 |
| ggcgtaatca  | tggtcatagc | tgtttcctgt | gtgaaattgt  | tatccgctca  | caattccaca | 2760 |
| caacatacga  | gccggaagca | taaagtgtaa | agcctggggg  | gcctaattgag | tgagctaact | 2820 |
| cacattaatt  | gcgttgcgct | cactgcccgc | tttccagtcg  | ggaaacctgt  | cgtgccagct | 2880 |
| gcattaatga  | atcggccaac | gcgcggggag | aggcggtttg  | cgtattgggc  | gctcttccgc | 2940 |
| ttcctcgctc  | actgactcgc | tgcgctcggt | cgttcggtcg  | cggcgagcgg  | tatcagctca | 3000 |
| ctcaaaggcg  | gtaatacggg | tatccacaga | atcaggggat  | aacgcaggaa  | agaacatgtg | 3060 |
| agcaaaaagg  | cagcaaaaag | ccaggaaccg | taaaaaggcc  | gcgttgctgg  | cgtttttcca | 3120 |
| taggctccgc  | ccccctgacg | agcatcacaa | aaatcgacgc  | tcaagtcaga  | ggtggcgaaa | 3180 |
| cccgcacagga | ctataaagat | accaggcggt | tccccctgga  | agctccctcg  | tgcgctctcc | 3240 |
| tgttccgacc  | ctgccgctta | ccggatacct | gtccgccttt  | ctcccttcgg  | gaagcgtggc | 3300 |
| gctttctcat  | agctcacgct | gtaggtatct | cagttcggtg  | taggtcgttc  | gctccaagct | 3360 |
| gggctgtgtg  | cacgaacccc | ccgttcagcc | cgaccgctgc  | gccttatccg  | gtaactatcg | 3420 |
| tcttgagtcc  | aaccgcgtaa | gacacgactt | atcgccactg  | gcagcagcca  | ctggtaacag | 3480 |
| gattagcaga  | gcgaggtatg | taggcggtgc | tacagagttc  | ttgaagtggg  | ggcctaacta | 3540 |
| cggctacact  | agaagaacag | tatttggtat | ctgcgctctg  | ctgaagccag  | ttaccttcgg | 3600 |
| aaaaagagtt  | ggtagctctt | gatccggcaa | acaaaccacc  | gctggtagcg  | gtttttttgt | 3660 |
| ttgcaagcag  | cagattacgc | gcagaaaaaa | aggatctcaa  | gaagatcctt  | tgatcttttc | 3720 |
| tacggggtct  | gacgctcagt | ggaacgaaaa | ctcacgttaa  | gggattttgg  | tcatgagatt | 3780 |
| atcaaaaagg  | atcttcacct | agatcctttt | aaattaaana  | tgaagtttta  | aatcaatcta | 3840 |
| aagtatatat  | gagtaaactt | ggtctgacag | ttaccaatgc  | ttaatcagtg  | aggcacctat | 3900 |
| ctcagcgatc  | tgtctatttc | gttcatccat | agttgcctga  | ctccccgtcg  | tgtagataac | 3960 |
| tacgatacgg  | gagggcttac | catctggccc | cagtgtctga  | atgataccgc  | gagaccacg  | 4020 |
| ctcaccggct  | ccagatttat | cagcaataaa | ccagccagcc  | ggaagggccg  | agcgcagaag | 4080 |
| tggtcctgca  | actttatccg | cctccatcca | gtctattaat  | tgttgccggg  | aagctagagt | 4140 |
| aagtagttcg  | ccagttaata | gtttgcgcaa | cgttgttgcc  | attgctacag  | gcatcgtggg | 4200 |
| gtcacgctcg  | tcgtttggta | tggtttcatt | cagctccggg  | tcccaacgat  | caaggcgagt | 4260 |
| tacatgatcc  | cccatgttgt | gcaaaaaagc | ggtagctcc   | ttcggtcctc  | cgatcgttgt | 4320 |
| cagaagtaag  | ttggccgcag | tgttatcact | catggttatg  | gcagcactgc  | ataattctct | 4380 |



|   |      |
|---|------|
| tactgtcatg ccatccgtaa gatgcttttc tgtgactggt gagtactcaa ccaagtcatt | 4440 |
| ctgagaatag tgtatgcggc gaccgagttg ctcttgcccg gcgtaatac gggataatac  | 4500 |
| cgcgccacat agcagaactt taaaagtgt catcattgga aaacgttctt cggggcgaaa  | 4560 |
| actctcaagg atcttaccgc tggtgagatc cagttcgatg taaccactc gtgcacccaa  | 4620 |
| ctgatcttca gcatctttta ctttcaccag cgtttctggg tgagcaaaaa caggaaggca | 4680 |
| aatgcccga aaaaagggaa taagggcgac acggaaatgt tgaataactca tactcttcct | 4740 |
| ttttcaatat tattgaagca tttatcaggg ttattgtctc atgagcggat acatatttga | 4800 |
| atgtatttag aaaaataaac aaataggggt tccgcgcaca tttccccgaa aagtgccacc | 4860 |
| tgacgtc   | 4867 |

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 <212> DNA  
 <213> Artificial

<220>  
 <223> An artificially synthesized primer sequence

|                       |    |
|-----------------------|----|
| <400> 45              |    |
| ggggatcagc gtttgagtaa | 20 |

<210> 46  
 <211> 20  
 <212> DNA  
 <213> Artificial

<220>  
 <223> An artificially synthesized primer sequence

|                       |    |
|-----------------------|----|
| <400> 46              |    |
| taggccccac ctccttctat | 20 |

<210> 47  
 <211> 30  
 <212> DNA  
 <213> Artificial

<220>  
 <223> An artificially synthesized primer sequence

|                                 |    |
|---------------------------------|----|
| <400> 47                        |    |
| tgcgatcca gagcagattg tactgagagt | 30 |

<210> 48

<211> 29  
 <212> DNA  
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 <220>  
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 <400> 48  
 ctctatctcg agtgaggcgg aaagaacca 29  
  
 <210> 49  
 <211> 40  
 <212> DNA  
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 <220>  
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 <400> 49  
 tttaagcttg aagactatctt ttacatcagg ttgtttttct 40  
  
 <210> 50  
 <211> 37  
 <212> DNA  
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 <220>  
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 <400> 50  
 tttaagcttg aagacacggt gtttcgtcct ttccaca 37  
  
 <210> 51  
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 <212> DNA  
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 <220>  
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 caccgaagca gcacgacttc ttcttcaaga gagaagaagt cgtgctgctt c 51  
  
 <210> 52  
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 <220>  
 <223> An artificially synthesized oligonucleotide sequence  
  
 <400> 52  
 aaaagaagca gcacgacttc ttctctcttg aagaagaagt cgtgctgctt c 51

<210> 53  
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 <212> DNA  
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 <400> 53  
 ggggtaccag gatggagccg ctgaagggtgg 30  
  
 <210> 54  
 <211> 33  
 <212> DNA  
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 <400> 54  
 gggaattctt aggatgctct gatgttggcg tcg 33  
  
 <210> 55  
 <211> 51  
 <212> DNA  
 <213> Artificial  
  
 <220>  
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 <400> 55  
 aaacttatgg atggagcacc tttcaagaga aggtgctcca tccataagtt t 51  
  
 <210> 56  
 <211> 51  
 <212> DNA  
 <213> Artificial  
  
 <220>  
 <223> An artificially synthesized hairpin siRNA sequence  
  
 <400> 56  
 aatcagagaa gctttactca tttcaagaga atgagtaaag cttctctgat t 51  
  
 <210> 57  
 <211> 51  
 <212> DNA  
 <213> Artificial  
  
 <220>  
 <223> An artificially synthesized hairpin siRNA sequence

<400> 57  
 aacaaactga ctgaagataa gttcaagaga cttatcttca gtcagtttgt t 51

<210> 58  
 <211> 51  
 <212> DNA  
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<220>  
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<400> 58  
 aactcgtaat gacatttcaa cttcaagaga gttgaaatgt cattacgagt t 51

<210> 59  
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<220>  
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<400> 59  
 aaaagtgatc tgcaactctt tttcaagaga aaagagttgc agatcacttt t 51

<210> 60  
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 <212> DNA  
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<220>  
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<400> 60  
 aagtgatctg caactctttc attcaagaga tgaaagagtt gcagatcact t 51

<210> 61  
 <211> 51  
 <212> DNA  
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<220>  
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<400> 61  
 aactctttca ccatctgtaa tttcaagaga attacagatg gtgaaagagt t 51

<210> 62  
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 <212> DNA  
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<220>  
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 <400> 62  
 aactgttcga ttgtgttcaa tttcaagaga attgaacaca atcgaacagt t 51  
  
 <210> 63  
 <211> 51  
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 <400> 63  
 aaggatgctg atatgctaac tttcaagaga agttagcata tcagcatcct t 51  
  
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 <210> 65  
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 <220>  
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 <400> 65  
 aagtatggaa ggaagttcaa gttcaagaga cttgaacttc cttccatact t 51  
  
 <210> 66  
 <211> 51  
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 <223> An artificially synthesized hairpin siRNA sequence  
  
 <400> 66  
 aacatctacc agctgaaggt gttcaagaga caccttcagc tggtagatgt t 51  
  
 <210> 67

<211> 51  
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 <400> 67  
 aagcaatgaa gaatctgaga cttcaagaga gtctcagatt cttcattgct t 51  
  
 <210> 68  
 <211> 21  
 <212> DNA  
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 <223> An artificially synthesized target sequence for siRNA  
  
 <400> 68  
 aaacttatgg atggagcacc t 21  
  
 <210> 69  
 <211> 21  
 <212> DNA  
 <213> Artificial  
  
 <220>  
 <223> An artificially synthesized target sequence for siRNA  
  
 <400> 69  
 aatcagagaa gctttactca t 21  
  
 <210> 70  
 <211> 21  
 <212> DNA  
 <213> Artificial  
  
 <220>  
 <223> An artificially synthesized target sequence for siRNA  
  
 <400> 70  
 aacaaactga ctgaagataa g 21  
  
 <210> 71  
 <211> 21  
 <212> DNA  
 <213> Artificial  
  
 <220>  
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 <400> 71  
 aactcgtaat gacatttcaa c 21

<210> 72  
 <211> 21  
 <212> DNA  
 <213> Artificial  
  
 <220>  
 <223> An artificially synthesized target sequence for siRNA  
  
 <400> 72  
 aaaagtgatc tgcaactctt t 21

<210> 73  
 <211> 21  
 <212> DNA  
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 <400> 73  
 aagtgatctg caactctttc a 21

<210> 74  
 <211> 21  
 <212> DNA  
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 <220>  
 <223> An artificially synthesized target sequence for siRNA  
  
 <400> 74  
 aactctttca ccatctgtaa t 21

<210> 75  
 <211> 21  
 <212> DNA  
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 <400> 75  
 aactgttcga ttgtgttcaa t 21

<210> 76  
 <211> 21  
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 <220>  
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<400> 76  
 aaggatgctg atatgctaac t 21

<210> 77  
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<400> 77  
 aactggtgat gagcaagtat g 21

<210> 78  
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<400> 78  
 aagtatggaa ggaagttcaa g 21

<210> 79  
 <211> 21  
 <212> DNA  
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<220>  
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<400> 79  
 aacatctacc agctgaaggt g 21

<210> 80  
 <211> 21  
 <212> DNA  
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<220>  
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<400> 80  
 aagcaatgaa gaatctgaga c 21